(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 7 October 2004 (07.10.2004)

PCT

(10) International Publication Number WO 2004/086452 A2

(51) International Patent Classification7: 37/28, 37/317

H01J 37/147,

(21) International Application Number:

PCT/EP2004/002841

(22) International Filing Date: 18 March 2004 (18.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03006716.9

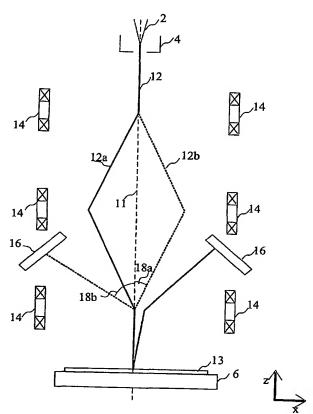
24 March 2003 (24.03.2003)

(71) Applicant (for all designated States except US): ICT, IN-TEGRATED CIRCUIT TESTING GESELLSCHAFT FÜR HALBLEITERPRÜFTECHNIK MBH [DE/DE]; Ammerthalstr. 20a, 85551 Heimstetten (DE).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): FROSIEN, Juergen [DE/DE]; Kufsteinerstr. 16a, 85521 Riemerling (DE).
- (74) Agents: ZIMMERMANN, Gerd et al.; Zimmermann & Partner, P.O. Box 330 920, 80069 Munich (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: CHARGED PARTICLE BEAM DEVICE WITH DETECTION UNIT SWITCH AND METHOD OF OPERATION



(57) Abstract: The invention provides a charged particle beam device and a method of operation thereof. An emitter (2) emits a primary charged particle beam (12). Depending on the action of a deflection system, which comprises at least three deflection stages (14), it can be switched between at least two detection units (16, 44). Further, beam shaping means (15; 41) is provided and a lens for focusing at the primary charged particle beam on a specimen.

Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

 without international search report and to be republished upon receipt of that report